

Research and Development

June 2011



US Army Corps of Engineers
BUILDING STRONG®



Directorate of Research and Development

HQUSACE

Director
Dr. Jeffery Holland



Director, Research and Development is permanently dual-hatted as Director, Engineer Research and Development Center

Deputy Director
Mr. Steven Cary



Secretary

Assistant Director
Civil Works

Assistant Director
EQT/Installations

Assistant Director
Geospatial & Military Engineering

Program Officer
Strategic Initiatives

Supervisory Executive Director
Operations & Support

Administrative Officer

Research Specialist



CERD Mission Overview

- **One of three HQUSACE Program Directorates (CECW, CEMP, CERD)**
- **Advise the Chief on S&T matters**
- **The Corps interface on Science and Technology (S&T) with the Army, DoD, interagency, national and international communities**
- **Align S&T investments with USACE, Army, DoD interagency, and national strategic directions**
- **Develop policies that enable the Corps to exploit existing S&T now and focus R&D on best opportunities for high return on investment**



R&D - What We Do

R&D has a very important role in current engagements and in planning for future needs of the Soldier and the Nation

- **The Directorate of Research and Development builds strategic relationships in science and technology and enables the development of new national-level capabilities - for example, frameworks, methodologies, and tools for deliberate planning and information sharing for contingency operations.**
- **The Engineer Research and Development Center, 2009 Army Research Laboratory of the Year, conducts world-class R&D in an innovative, vibrant \$1.5B program that supports hundreds of customers in the Army, other services, the Department of Defense and the Nation.**



R&D - Business Lines

- **Civil Works**
- **Environmental Quality**
- **Installations Support**
- **Military Engineering**
- **Geospatial Research and Engineering**



USACE Campaign Plan

R&D supports USACE Campaign Plan strategic goals.

In particular, CERD is helping the Corps get to Great in these objectives:

1-a-2: Concept Development, Experimental and Exercise Program for Contingency Operations

3-d-1: Innovation - Knowledge Management/Technology Transfer



Staff Functions

CERD -ZA Director, R&D

- **Principal S&T advisor to the Chief of Engineers**
- **Engages in strategic planning, strategic direction, and legislative initiatives for Corps S&T**
- **Maintains situational awareness of current and future global, national, and agency level directions**
- **Sets conditions for success in all S&T conducted in the Corps**
- **Creates and shapes Corps S&T policy**
- **Fosters strategic relationships in S&T between the Corps and the administration, Congress, agencies, industry and non-governmental organizations**
- **Develops mechanisms for partnering to serve the Corps**
- **Cultivates an enabling, supportive role for the Corps S&T on the Army staff and at OSD**



Staff Functions

CERD-ZB Deputy Director, Strategic Program Oversight

- **Advises the Director, R&D on strategic issues and opportunities across the spectrum of S&T**
- **Develops and directs strategic initiatives to identify, focus, and prioritize technology directions to ensure that the Corps is responsive to users**
- **Identifies and fosters strategic relationships focused on broad S&T initiatives that engage other government agencies, industry, academe, and international partners**
- **Establishes Corps policies for strategic planning, strategic direction, and technology infusion in Civil Works R&D, Installations Support/
Environmental Quality R&D, and Warfighter R&D; both direct-funded and reimbursable**
- **Provides headquarters (Washington-level) oversight to ensure that S&T is meeting user needs**



Staff Functions

CERD -ZC *Executive Director, Operations and Support*

- **Serves as principal advisor for development, interpretation, and implementation of administrative and managerial policy for the Director, R&D.**
- **Coordinates all administrative, personnel, budget, and resource management functions for the directorate. Represents the directorate at headquarters corporate forums.**
- **Formulates and defends operating and program accounts and manpower requirements for the directorate. Participates in the headquarters operating budget formulation process and manpower requirements process.**



Summary

- **CERD is a HQUSACE Program Directorate**
- **CERD Director (permanently dual-hatted as Director, ERDC) reports to DCG**
- **9 FTE**
- **CERD aligns S&T investments with USACE, Army, DoD, interagency, and national strategic directions and develop policies that enable the Corps to exploit existing S&T now and focus R&D on best opportunities for high return on investment**
- **CERD focuses and manages Corps-specific technology investments for the Army and DoD through collaborative, interagency ventures in advanced concepts development and experimentation**
- **Director serves as the science and technology advisor to the Chief**



USACE R&D

ERDC

- **USACE Major Subordinate Command**
- **2500 employees**
- **Execute R&D programs in support of the Soldier, military installations, and the Corps civil works mission, as well as for other federal agencies, state & municipal authorities, and with U.S. industry through innovative work agreements**
- **Research areas: Civil Works, Military Engineering, Geospatial Research & Engineering, Environmental Quality and Installations Support**
- **Provide operational products & services and reach-back capability to support military and civil operations**

CERD

- **HQUSACE Program Directorate**
- **9 employees**
- **Focus and manage Corps-specific technology investments for the Army and DoD through collaborative, interagency ventures in advanced concepts development and experimentation**
- **Align S&T investments with USACE, Army, DoD, interagency, and national strategic directions and develop policies that enable the Corps to exploit existing S&T now and focus R&D on best opportunities for high ROI**
- **Director is the science and technology advisor to the Chief**



BUILDING STRONG®

USACE Engineer Research & Development

*Support to the Army and the Nation,
Leveraging Technical Engineer Capabilities with R&D*

Rapid Airfield
Construction



Enable Theater
Access

Force
Protection

Chem/Bio

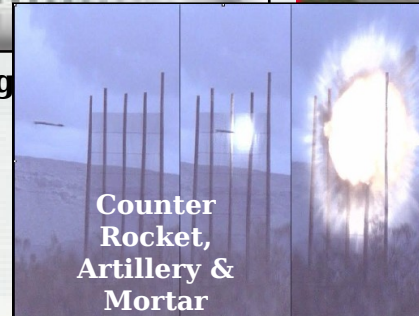


Immune Building

Structural
Retrofit

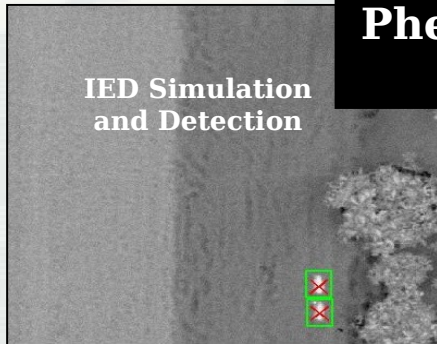


Counter
Rocket,
Artillery &
Mortar

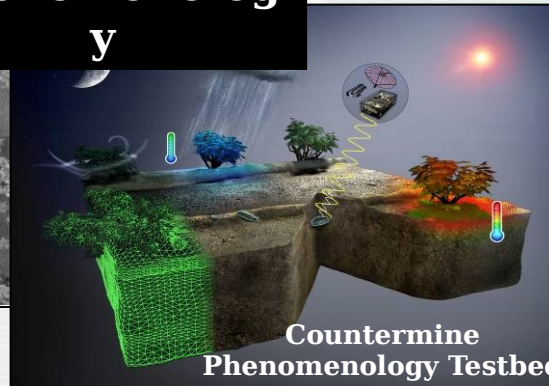


Countermine
Phenomenolog
y

IED Simulation
and Detection



Countermine
Phenomenology Testbed



USACE Engineer Research & Development Center

- * 2500 Employees (1800 Full Time Federal)
- * 991 Scientists & Engineers
- * \$1.2 Billion in Unique Research Facilities & Equipment
- * \$1.5 Billion Annual Program
- * 77 Active Patents



Cold Regions Research and Engineering
Hanover, NH



Construction Engineering Research Laboratory
Champaign, IL



Topographic Engineering
Alexandria, VA



ERDC Headquarters
Coastal and Hydraulics Laboratory
Environmental Laboratory
Geotechnical and Structures Laboratory
Vicksburg, MS

